

JAMES A. RUSAK - *Curriculum Vitae*

Center for Limnology, Trout Lake Station
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Citizenship: Canadian

Education:

Ph.D. - 2000 - York University, Department of Biology

- Thesis: "Variability in the zooplankton of north-temperate lakes: its estimation, spatial and temporal extent, synchrony, and the influence of environmental change".
- Supervisors: Norman D. Yan and Donald J. McQueen.

Master of Science - 1993 - Lakehead University, Department of Biology

- Thesis: "Resistance, resilience, and regulation of north-temperate lake communities".
- Supervisor: Douglas W. Morris.

Bachelor of Science - 1985 - University of Guelph

- Honours: Major in Marine Biology (1984) and a minor in Ecology (1985).

Research Experience:

Research Scientist - May 2002 to present – University of Wisconsin-Madison, Center for Limnology, Trout Lake Station, Wisconsin.

- Co-PI and site manager for the NSF-funded North Temperate Lakes Long Term Ecological Research Site.

Postdoctoral Fellow - Sept 1999 to May 2002 - University of Regina, Department of Biology

- Quantify the periodicity and predictability of prairie droughts and evaluate recent environmental stresses to temperate lakes using paleolimnological data. NSERC Strategic Grant, P. R. Leavitt, Principal Investigator.
- Investigate the effect of climate change on carbon sequestration in lakes. BIOCAP Grant, P. R. Leavitt and J. A. Rusak, Co-Principal Investigators.

Ecosystem Biologist - June 1994 to July 1995 - Lake Superior Programs, Thunder Bay, ON

- Formulated Remedial Action Plans and their supporting documents for Lake Superior Areas of Concern.

Fisheries Biologist - Sept 1993 to June 1994 - Ministry of Transportation, Thunder Bay, ON

- Measured fish habitat degradation, negotiated compensation plans, and advised provincial habitat restoration programs.

Fisheries Biologist - June 1993 to August 1993 - Lake Superior Programs, Thunder Bay, ON

- Investigated response of lotic brook trout populations to rainbow trout introduction and habitat modification.

Habitat Biologist - May 1987 to Dec 1990 - Ministry of Natural Resources, Kenora, ON

- Conducted a telemetry study on the biology, status, and management of lake sturgeon in Lake of the Woods and the Rainy River.

Grants:

- *Pending*: NSF-Ecology Research Proposal “Does species diversity drive biological production or vice versa? Towards a unification of historical and contemporary paradigms” (\$570,000) – Co-Principal Investigator, 2007.
- NSF-Ecology Research Grant “The influence of disturbance and seasonal change on microbial community diversity and dynamics in lakes” (\$531,322) – Co-Principal Investigator, 2007.
- NSF-Ecology/Ecosystems Research Grant: “The response of lakes to disturbance and climate change: calibrating sedimentary records to test the landscape position concept” (\$482,900) – Co-Principal Investigator, 2005.
- NSF-LTER International Collaborative Research Grant: “Spatio-temporal patterns of variability in lake physics, chemistry, and biology” (\$15,240) – Principal Investigator, 2004
- NSF-LTER Synthesis Grant “Disturbance and Variance: Detecting change in terrestrial and aquatic ecosystems” (\$10,000) – Principal Investigator, 2004.
- NSERC-BIOCAP Grant “Agricultural adaptation to climatic warming: the role of carbon storage in prairie lakes under drier climates” (\$49,000) – Principal Investigator, 2000.

Awards:

- Zayed International Prize for the Environment (awarded to Millennium Ecosystem Assessment authors) - 2005
- NSERC Postdoctoral Fellowship (\$70,000 over 2 years) – 2002 (declined).
- York University President’s Dissertation Scholarship (\$17,000) – 1999.
- Ontario Graduate Scholarship in Science and Technology (\$5,000) – 1998.
- York University Entrance Scholarship (\$3,500) – 1995.
- NSERC Postgraduate Scholarship (PGS B - \$35,000/yr) – 1993/4.
- Lakehead University Northern Studies Entrance Award (\$2,000) – 1991.
- Ministry of Natural Resources Postgraduate Research Stipend (\$24,000/yr) – 1991/2.

Teaching and Supervision:

Co-supervisor – September 2006 to present - University of Wisconsin-Madison

- Ph.D. candidate: “Paleolimnological responses to disturbance along a landscape position gradient”.

Supervisor – summers of 2004, 2005, 2006, 2007 - University of Wisconsin-Madison

- NSF’s Research Experience for Undergraduate Awards (5 students).

Invited Lecturer - September 2003 – University of Wisconsin-Madison

- Zoology 955 – Multivariate Statistics component of *Analysis and Interpretation of Long-Term Ecological Data* Graduate Course.

Sessional Lecturer - September 1999 to December 1999 - University of Regina

- Biology 335 - *Limnology*. Lecture, discussion, laboratory, and field components for this course on aquatic ecosystems.

University Teaching and Learning Practicum - January 1998 - York University

- Course and workshops on philosophy and practice of teaching and learning.

Co-advisor - September 1999 to April 2000

- B.Sc. Honours student thesis - University of Regina.

Co-ordinator and chair – September 1992 to December 1993 / November 2000 to 2002

- Lakehead University / University of Regina Ecology and Evolution Discussion groups.

Submissions and Publications:

Solomon, C.T., S.R. Carpenter, M.J. Vander Zanden and J.A. Rusak. Long-term isotopic baseline variation, and implications for inferring consumer trophic niches. [Resubmitted to Canadian Journal of Fisheries and Aquatic Sciences \(in review\)](#).

Fraterrigo, J.M. and J.A. Rusak. Disturbance-driven changes in the variability of ecological patterns and processes. [Under revision for Ecology Letters](#).

Hodgson, K.L., M.A. Xenopoulos, and J.A. Rusak. *In Press*. Trophic asymmetry of species losses and altered function following lake acidification. *Aquatic Ecology*.

Rusak, J.A., N.D. Yan, and K.M. Somers. *In Press*. Regional climatic drivers of synchronous zooplankton dynamics in north-temperate lakes. *Canadian Journal of Fisheries and Aquatic Sciences*.

Yan, N.D., K.M. Somers, R.E. Girard, A.M. Paterson, C. Ramcharan, J.A. Rusak, R. Ingram, G.E. Morgan, and J. Gunn. *In Press*. Long-term changes in crustacean zooplankton communities of Dorset, Ontario lakes: the probable interactive effects of changes in pH, TP, Dissolved Organic Carbon, and predators. *Canadian Journal of Fisheries and Aquatic Sciences*.

Rusak J.A., S.E. Jones, A.D. Kent, A.L. Shade, and T.M. McMahon. *In Press*. Spatial synchrony in microbial community dynamics: testing among-year and lake patterns. *Verhandlungen Internationale Vereinigung fur Theoretische und Angewandte Limnologie*.

Kent, A.D., Yannarell, A.C., Rusak, J.A., Triplett, E.W., and McMahon, K.D. 2007. Synchrony in aquatic microbial community dynamics. *The International Society of Microbial Ecology Journal* 1: 38-47.

Carpenter, S.R., Benson, B.J., Biggs, R., Chipman, J.W., Foley, J.A., Golding, S.A., Hammer, R.B., Hanson, P.C., Johnson, P.T.J., Kamarainen, A.M., Kratz, T.K., Lathrop, R.C., McMahon, K.D., Provencher, B., Rusak, J.A., Solomon, C.T., Stanley, E.H., Turner, M.G., Vander Zanden, M.J., Wu, C.H., and Yuan, H.L. 2007. Understanding regional change: A comparison of two lake districts. *Bioscience* 57: 323-335.

- Dobson, A., D. Lodge, J. Alder, G. Cumming, J. Keymer, J. McGlade, H. Mooney, J. A. Rusak, O. Sala, V. Wolters, D. Wall, M. A. Xenopoulos. 2006. Habitat loss, trophic collapse and the decline of ecosystem services. *Ecology* **87**:1915-1924.
- White, E.P., P.B. Adler, W.K. Lauenroth, R.A. Gill, D. Greenberg, D.M. Kaufman, A. Rassweiler, J.A. Rusak, M.D. Smith, J.R. Steinbeck, R.B. Waide, J. Yao. 2006. A comparison of the species-time relationship across ecosystems and taxonomic groups. *Oikos* **112**:185-195.
- Sala, O.E., D. van Vuuren, H.M. Pereira, D. Lodge, J. Alder, G. Cumming, A. Dobson, V. Wolters, M.A. Xenopoulos, A.S. Zaitsev, M.G. Polo, I. Gomes, C. Queiroz, and J.A. Rusak. 2005. Biodiversity across Scenarios, p. 375-408. In [eds.], S.R. Carpenter, P.L. Pingali, E.M. Bennett, and M.B. Zurek. *Ecosystems and Human well-being: Scenarios*. Island Press. Washington, USA.
- P.B. Adler, E.P. White, W.K. Lauenroth, D.M. Kaufman, A. Rassweiler, and J.A. Rusak. 2005. Evidence for a general species-time-area relationship. *Ecology* **86**: 2032-2039.
- Rusak, J.A., P.R. Leavitt, S. McGowan, G. Chen, O. Olson, S. Wunsam, and B. Cumming. 2004. Millennial-scale relationships of diatom species richness and production in two prairie lakes. *Limnology and Oceanography* **49**: 1290-1299.
- Laird, K.R., B.F. Cumming, S. Wunsam, J.A. Rusak, R.J. Oglesby, S.C. Fritz and P.R. Leavitt. 2003. Lake sediments record large-scale shifts in moisture regimes across the northern prairies of North America during the past two millennia. *Proceedings of the National Academy of Sciences* **100**: 2483–2488.
- Rusak, J.A., N.D. Yan, K.M. Somers, K.L. Cottingham, F. Micheli, S.R. Carpenter, T.M. Frost, M.J. Paterson, and D.J. McQueen. 2002. A regional catalogue of crustacean zooplankton variability: temporal, spatial, and taxonomic patterns in unmanipulated north-temperate lakes. *Limnology and Oceanography* **47**: 613-625.
- Rusak, J.A., N.D. Yan, K.M. Somers, D.J. McQueen, and C.W. Ramcharan. 2001. Differences in the variability of crustacean zooplankton communities between manipulated and reference lakes. *Archiv für Hydrobiologie - Advances in Limnology* **56**: 171-186.
- Ramcharan, C.W., N.D. Yan, D.J. McQueen, A. Perez-Fuentetaja, E. Demers, and J.A. Rusak. 2001. Complex responses of *Chaoborus* to changes in fish populations. *Archiv für Hydrobiologie - Advances in Limnology* **56**: 81-100.
- Ramcharan, C.W., D.J. McQueen, A. Perez-Fuentetaja, N.D. Yan, E. Demers, and J.A. Rusak. 2001. Analyses of lake food webs using individual-based models to estimate *Chaoborus* production and consumption. *Archiv für Hydrobiologie - Advances in Limnology* **56**: 101-126.
- Yan, N.D., A. Perez-Fuentetaja, C.W. Ramcharan, D.J. McQueen, E. Demers, and J.A. Rusak. 2001. The Dorset food web piscivore manipulation project: changes in the crustacean zooplankton communities of Mouse and Ranger lakes. *Archiv für Hydrobiologie - Advances in Limnology* **56**: 127-150.
- Ramcharan, C.W., A. Perez-Fuentetaja, D.J. McQueen, N.D. Yan, E. Demers, and J.A. Rusak. 2001. Dynamics of zooplankton productivity under two different predatory regimes. *Archiv für Hydrobiologie - Advances in Limnology* **56**: 151-170.
- Cottingham, K.L., J.A. Rusak, and P.R. Leavitt. 2000. Increased ecosystem variability and reduced predictability following nutrient enrichment: evidence from paleolimnology. *Ecology Letters* **3**: 340-348.

Rusak, J.A., N.D. Yan, K.M. Somers, and D.J. McQueen. 1999. The temporal coherence of zooplankton population abundance in neighboring north-temperate lakes. *The American Naturalist* **153**: 46-58.

Micheli, F., K.L. Cottingham, J. Bascompte, O.N. Bjørnstad, G.L. Eckert, J.M. Fischer, T.H. Keitt, B.E. Kendall, J.L. Klug, and J.A. Rusak. 1999. The dual nature of community variability. *Oikos* **85**: 161-169 (*Journal note: All authors contributed equally, the first and second edited the manuscript for submission*).

Rusak, J. A. and T. Mosindy. 1997. Seasonal movements of lake sturgeon in Lake of the Woods and Rainy River, Ontario. *Canadian Journal of Zoology* **75**: 383-395.

Other Peer-Reviewed Publications:

Rusak, J. A., and Leavitt, P.R. (2001) Historical Trends in the Production and Water Quality of Big Shell Lake, SK. (Technical report - Big Shell Lake Watershed Association).

Morash, P. and J.A. Rusak. 1996. Jackfish Bay Stage 2: Remedial Strategies for Ecosystem Restoration. Lake Superior Programs Press. 88 p

Rusak, J.A. and P. Morash. 1995. Nipigon Bay Stage 2: Remedial Strategies for Ecosystem Restoration. Lake Superior Programs Press. 80 p.

Rusak, J.A. and P. Morash. 1994. A Discussion of Remedial Options in the Nipigon Bay Area of Concern. Lake Superior Programs Press. 69 p.

Draft Manuscripts:

Helmus, M.R., J.A. Rusak, M.J. Patterson, W.B. Keller, N.D. Yan. Communities contain closely related species during ecosystem disturbance: Examples from whole-lake experiment zooplankton communities. For submission to *Ecology*.

Rusak, J.A., A. Patoine, C. Brock, and P.R. Leavitt. Local, landscape, and regional regulation of zooplankton communities in lakes of the northern Great Plains. For submission to *Limnology and Oceanography*.

Leavitt, P.R., G. Chen, J.A. Rusak, S. Wunsam, S. Dietrich, B.F. Cumming, K.R. Laird, J. Kiss. Risk analysis of future droughts in Central North America using paleoclimate time series. For submission to *Nature*.

Legendre, P., J.A. Rusak, and D. Borcard. Zooplankton community resistance following a whole-lake acidification experiment. For submission to *Canadian Journal of Fisheries and Aquatic Sciences*.

Yan, N.D., J.A. Rusak and C.W. Ramcharan. Comparing the impacts of vertebrate and invertebrate predator introductions on freshwater zooplankton. For submission to *Nature*.

Preston, N.D., J.A. Rusak, S.R. Carpenter. 2006. Climate-driven changes in zooplankton communities of northern temperate lakes. For submission to *Limnology and Oceanography*

Published Abstracts:

- Rusak, J.A., K.L. Hogsden, and M.A. Xenopoulos. 2008. Asymmetrical food web responses in trophic-level richness, biomass and function following lake acidification: implications for ecosystem recovery. Conference for Canadian Fisheries Research / Society of Canadian Limnologists, January 3-5, Halifax, NS.
- Rusak, J.A., S. Jones, T. McMahon, A. Shade, A. Kent. 2007. Sustaining synchrony in microbial communities: drivers of seasonal and interannual dynamics. International Society of Limnology Conference, August 11-18, Montreal, QC.
- Helmus, M.R., J.A. Rusak, M.J. Patterson, W.B. Keller, N.D. Yan. 2007. Communities contain closely related species during ecosystem disturbance: Examples from whole-lake experiment zooplankton communities. Ecological Society of America Annual Meeting, August 1-6, Portland, OR. (*Honourable mention: ESA Best Student Talk Award*)
- Rusak, J.A., P.C. Hanson, S.R. Carpenter, S.E.M. Kasian, A.M. Paterson, K.M. Somers 2007. Lake-specific interactions between water chemistry and dissolved organic carbon among regions. American Society of Limnology and Oceanography Conference, Feb 4-9. Santa Fe, NM.
- Rusak, J.A., P.C. Hanson, S.R. Carpenter, S.E.M. Kasian, A.M. Paterson, K.M. Somers. 2006. Regional differences in long-term interactions among chemical and physical variables in north-temperate lakes. American Society of Limnology and Oceanography Conference, June 4-9. Victoria, BC.
- Preston, N.D., J.A. Rusak, S.R. Carpenter. 2006. Climate-driven changes in spring conditions: the effect of ice-cover on zooplankton hatch dates in northern temperate lakes. American Society of Limnology and Oceanography Conference, June 4-9. Victoria, BC.
- Leavitt, P.R., S. Wunsam, J.A. Rusak, S.C. Fritz, B.F. Cumming, K.R. Laird, A. Michels. 2006. Regulation of lake structure and function by jet-stream movement over the Northern Great Plains. American Society of Limnology and Oceanography Conference, June 4-9. Victoria, BC.
- Kent, A.D., A.C. Yannarell, J.A. Rusak, E.W. Triplett, and K.D. McMahon. 2006. Synchrony and temporal concordance in freshwater microbial communities in a suite of north temperate humic lakes. American Society of Limnology and Oceanography Conference, June 4-9. Victoria, BC.
- Rusak, J.A., S. Hotchkiss, M. Alexander, and A. Marburg. 2005. Does shoreline development influence the offshore transport of sedimentary organic carbon? North American Lake Management Society Annual Meeting, November 9-11. Madison, WI.
- Rusak, J.A., and J. Vander Zanden. 2005. Temporal and spatial variability of C and N isotope ratios in north-temperate zooplankton. American Society of Limnology and Oceanography Conference, June 19-24. Santiago de Compostela, Spain.
- Rusak, J.A., N.D. Yan, K.M. Somers, and E.A. Levitt. 2005. Coherence revisited: regional climatic drivers of (still) synchronous zooplankton dynamics in Dorset lakes. Conference for Canadian Fisheries Research / Society of Canadian Limnologists, January 6-9, Windsor, ON.
- Rusak, J.A., P.M. Montz. 2004. North-temperate zooplankton community responses to a recurring disturbance. Ecological Society of America Annual Meeting, August 1-6, Portland, OR.

- Legendre, P., D. Borcard et J.A. Rusak. 2004. Variation temporelle du zooplancton au cours d'une expérience d'acidification au lac Little Rock, Wisconsin. 14e symposium annuel du Groupe de Recherche Interuniversitaire en Limnologie et en Environnement Aquatique (GRIL), Station de Biologie des Laurentides, Saint-Hippolyte, Québec, 6 mars 2004.
- Rusak, J.A., T.K. Kratz, B.J. Benson, P.M. Montz, T.M. Meinke and S.R. Carpenter. 2003. Physical and biological responses to climate warming in north-temperate lakes. American Society of Limnology and Oceanography Conference, February 8-14, Salt Lake City, UT.
- Rusak, J.A., T.K. Kratz, B.J. Benson, P.M. Montz, T.M. Meinke and S.R. Carpenter. 2003. Climate warming impacts on water temperatures and zooplankton dynamics. Conference for Canadian Fisheries Research / Society of Canadian Limnologists, January 2-5, Ottawa, ON.
- Rusak, J. A., P. R. Leavitt, M. D. Graham, S. McGowan, S. Wunsam, and B. Cumming. 2002. The temporal scale of richness-productivity relationships in lakes: effects of climate, species composition, and ecosystem processes. Biocomplexity Symposium/Workshop, September 29-30, Ann Arbor, MI.
- Rusak, J.A., P.R. Leavitt, M.D. Graham, S. McGowan, S. Wunsam, and B. Cumming. 2002. Multi-scale control of prairie lake nutrient cycling and production. Conference for Canadian Fisheries Research / Society of Canadian Limnologists, January 3-5, Vancouver, BC.
- Leavitt, P.R., G. Chen, J.A. Rusak, O.G. Olson, S. Wunsam, B.F. Cumming, and K. Laird. 2002. Natural Disturbances on Landscapes and Their Impacts on Aquatic Systems. American Society of Limnology and Oceanography Conference, June 10-14, Victoria, BC.
- Leavitt, P.R., G. Chen, J.A. Rusak, O.G. Olson, S. Wunsam, B.F. Cumming, and K. Laird. 2002. The Past, Present And Future Of Prairie Droughts. Conference for Canadian Fisheries Research / Society of Canadian Limnologists, January 3-5, Vancouver, BC.
- Rusak, J.A., C.S. Brock, and P.R. Leavitt. 2001. Population synchrony in a hydrologically connected landscape: quantifying patterns and identifying processes. Ecological Society of America Annual Meeting, August 5-10, Madison, WI.
- Yan, N.D., C.W. Ramcharan, J.A. Rusak and others. 2001. Comparing the impacts of bass vs. *Bythotrephes* introductions on freshwater zooplankton. Ecological Society of America Annual Meeting, August 5-10, Madison, WI.
- Rusak, J.A., P.R. Leavitt, M. Graham, S. Wunsam, G. Chen, and B. Cumming. 2001. Climatic and agricultural influences on the relationship between richness and lake productivity on the northern great plains: a paleolimnological perspective. American Society of Limnology and Oceanography Conference, February 10-16, Albuquerque, NM.
- Rusak, J.A., C.S. Brock, and P.R. Leavitt. 2001. Landscape-level patterns of zooplankton abundance in lakes of the Qu'Appelle Valley, Saskatchewan. Conference for Canadian Fisheries Research / Society of Canadian Limnologists, January 4-6, Toronto, ON.
- Rusak, J.A., P.R. Leavitt, and G. Chen. 2000. Predicting prairie droughts and the influence of a changing climate on carbon sequestration by prairie lakes. Agriculture and Greenhouse Gas/Climate Change Workshop. December 11-12, Saskatoon, SK.
- Leavitt, P.R., G. Chen, and J.A. Rusak. 2000. Prairie Droughts and Floods: Past, Present, and Future. Agri-Food Innovation Fund Conference - Sustainable Agriculture. November 7-8, Regina, SK.

- Leavitt, P.R., J.A. Rusak, O.G. Olson, S. Wunsam, G. Chen, M. Chen, J. You, L. Zhang, and B. Cumming. 2000. Droughts, Lakes And Crop Insurance: Ecological Risk Assessment Using Mud And Math. Ecological Society of America, August 6-10, Snowbird, UT.
- Rusak, J.A., P.R. Leavitt, G. Chen, S. Wunsam, M. Graham, M. Chen, J. You, and L. Zhang. 2000. A regional perspective on future droughts in the northern Great Plains. Canadian Water Resource Association Conference. June 28-30, Saskatoon, SK.
- Rusak, J.A., N.D. Yan, and K.M. Somers. 2000. Can we use historical zooplankton data to set recovery targets? Northern Lake Recovery Study workshop, June 10-12, Grimstad, Norway.
- Rusak, J.A., P.R. Leavitt, G. Chen, S. Wunsam, M. Graham, M. Chen, J. You, and L. Zhang. 2000. Predicting the future and unravelling the past: paleolimnological analyses of fluctuations in the climate and water quality of central Saskatchewan. American Society of Limnology and Oceanography Conference, June 6-9, Copenhagen, Denmark.
- Rusak, J.A., P.R. Leavitt, M. Graham, G. Chen, M. Chen, J. You, and L. Zhang. 2000. Paleolimnological tools and techniques for monitoring past variability and future predictability of aquatic ecosystems. Saskatchewan Environment and Resource Management "Monitoring for Ecosystem Health" Conference, April 4-6, Regina, SK.
- Somers, K.M., M.N. Futter, J.A. Rusak, and N.D. Yan. 1999. A generalized approach for estimating temporal coherence in short time series. 9th Lukacs Symposium - Frontiers of Environmental and Ecological Statistics for the 21st Century, April 23-25, Bowling Green, OH.
- Rusak, J.A., D.J. McQueen, N.D. Yan, K.M. Somers, and C.W. Ramcharan. 1999. Changes in the pelagic zooplankton community following whole-lake manipulations and the bigger picture from reference lakes. American Society of Limnology and Oceanography Conference, February 1-5, Santa Fe, NM.
- Cottingham, K.L., J.A. Rusak, and P.R. Leavitt. 1998. Increased ecosystem variability and reduced predictability following nutrient enrichment: evidence from paleolimnology. Ecological Society of America Annual Meeting, August 2-6, Baltimore, MY.
- Rusak, J.A., N.D. Yan, M. Paterson, T. Frost, S.R. Carpenter, K. Cottingham, F. Micheli, and the NCEAS Community Dynamics Working Group. 1998. Variability in experimental and reference north-temperate zooplankton communities: do location and manipulation matter? Ecological Society of America / American Society of Limnology and Oceanography Conference, June 7-12, 1998. St. Louis, MI.
- Rusak, J.A., N.D. Yan, M. Paterson, T. Frost, S.R. Carpenter, K. Cottingham, F. Micheli, and K. Somers. 1998. Long-term temporal variability of manipulated and unmanipulated north-temperate zooplankton communities. Conference for Canadian Fisheries Research / Society of Canadian Limnologists, January 2-4, Kingston, ON.
- Rusak, J.A., N.D. Yan, K.M. Somers, and D.J. McQueen. 1997. The temporal coherence of communities: a comparison of pelagic zooplankton assemblages in temperate lakes. American Society of Limnology and Oceanography Conference, February 10-14, Santa Fe, NM.
- Rusak, J.A., N.D. Yan, K.M. Somers, and D.J. McQueen. 1997. Long-term variation in pelagic zooplankton assemblages: do patterns exist among lakes? Conference for Canadian Fisheries Research / Society of Canadian Limnologists, January 2-4, Ottawa, ON.

Rusak, J.A., E. Demers, N.D. Yan, and K.M. Somers. 1996. Comparing the performance of techniques for assessing community variability. American Society of Limnology and Oceanography Conference, June 16-20, Milwaukee, Wisconsin.

Rusak, J.A., D.M. Morris, and R.J. Steedman. 1993. The resistance and resilience of northern lake communities. Conference for Canadian Fisheries Research / Society of Canadian Limnologists, January 3-5, 1993, Peterborough, ON.

Invited Lectures and Workshops:

- January 2005 – Society of Canadian Limnologists Conference “30 Years of Science at the Dorset Environmental Science Centre: Zooplankton-Climate Interactions” – Windsor, ON (lecture).
- August 2004 – LTER “Climate-disturbance interactions” synthesis working group at University of Alaska, Fairbanks, AK (lecture and workshop).
- February 2004 – LTER “Species-time relationships” synthesis working group at University of New Mexico, Albuquerque, NM (workshop).
- September 2003 – Long-term data analysis course at University of Wisconsin – Madison, Madison, WI (Multivariate Statistics Component).
- September 2002 - Biocomplexity workshop at Michigan Technological University, Ann Arbor, MI (lecture).
- July 2001 - Biomass size spectrum workshop at Canada Centre for Inland Waters, Burlington, ON (lecture).
- January 2001 - Society of Canadian Limnologists Conference “Landscape Ecology of Aquatic Ecosystems” session, Toronto, ON (lecture).
- June 2000 - Northern Lake Recovery Study workshop to quantify chemical and biological recovery of acid-stressed lakes in the Northern Hemisphere at Grimstad, Norway (workshop and lecture).
- January and November 1997, March 1998 - National Center for Ecological Analysis and Synthesis working group on *Intrinsic and Extrinsic Variability in Community Dynamics* at the University of California, Santa Barbara (workshops and lecture).
- January 1997 - Dorset Foodweb Manipulation Project, Dorset, ON - “The contrasting effects of regional climate and large-scale manipulations on crustacean zooplankton variability” (workshop and lecture).

Recent Collaborators (other than those cited in publications):

- D. Borcard, C.S. Brock, R. Calcote, B. Cardinale, F.S. Chapin, S. Collins, P. Dixon, K. Gross, S. Hotchkiss, P.L. Legendre, D. Peters, J. Saros.

Professional Activities and Community Service:

- Member:
 - Society of Canadian Limnologists
 - American Society of Limnology and Oceanography
 - International Association of Theoretical and Applied Limnology
 - Ecological Society of America
 - Federation of Ontario Naturalists, Nature Conservancy, World Wildlife Fund
- National Science Foundation Panellist: Ecosystems Grant Selection Panel (2007)
- LTER Network Synthesis Planning Grant (National Science Foundation) – charged with generating a proposal for a new NSF program that would fund inter-site synthetic research in the US for decades to come. Served as Biodiversity working group chair (2004-2005) and a member of final proposal writing team (2005-2006).
- Session chairs: SIL - August 2007 (*Extrinsic Forcing of Microbial Communities*) / LTER All Scientists Meeting – September 2006 (*Synthetic Retrospective and Paleoecology*) / SCL - January 2003 (*Forestry, Fire and Climate*) / LTER All Scientists Meeting – September 2003 (*Disturbance and Variance*) / SCL - January 2002 (*Patterns In Long-Term Time Series: Analyses, Insights and Applications*)
- Journal/Proposal Reviewer: *Ambio*, *American Association for the Advancement of Science grant proposal reviews*, *Canadian Journal of Fisheries and Aquatic Sciences*, *Ecology*, *Ecosystems*, *EPA grant proposal reviews*, *Environmental Reviews*, *Freshwater Biology*, *Global Change Biology*, *Hydrobiologia*, *International Review of Hydrobiology*, *Journal of Plankton Research*, *Journal of Vegetation Science*, *Limnology and Oceanography*, *National Science Foundation grant proposal reviews*, *Northwest Science*.
- Book Reviewer: *The Lakes Handbook*, Volume 2, for SIL News 2007.
- Steering Committee for Grey County Groundwater Management Study, 1999-2001.
- Advisory Committee for the Georgian Bay UN Littoral Biosphere Initiative, 1999-2001.
- Science Fair judge: *Arbor Vitae* - 2004, Regina - 2000-2001, Simcoe-Grey - 1998.
- Youth Soccer Coach - *Arbor Vitae*: 2002-2007, Regina: 2000-2001, Duntroon: 1999.